Feasibility of local anesthesia for umbilical hernia

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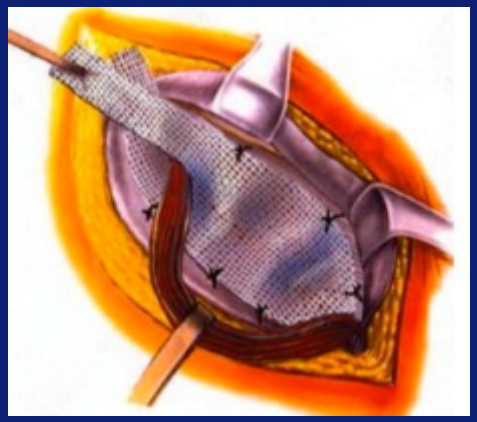
Advantages local anesthesia

- Less postoperative pain
- Less complications
- Early mobilization
- Shorter duration of stay
- Cost-effective

Literature

- On inguinal hernia & local anesthesia
  - Local anesthesia *superior**
- Lack of literature umbilical hernia & local anesthesia
- Therefore: **HUGO trial**



** R. Van Veen et al, Spinal or local anesthesia in Lichtenstein hernia repair: a randomized controlled trial, Ann. Surgery, 2008 Mar;247(3):428-33*

Hernia Umbilicalis: General versus LOcal anesthesia

- Aim: Comparison local versus general anesthesia in the surgical treatment of umbilical hernia

- Design: Randomized controlled trial
  N = 200, multicenter

- Primary endpoint: Fit for discharge (PADSS)

- Secondary endpoints:
  - Postoperative pain
  - Satisfaction surgeon/patient
  - Quality of life (EQ-5D, SF-36)
  - Use of analgesics
  - Duration of surgery
  - Complications
  - Recurrence
  - Cost-effectiveness

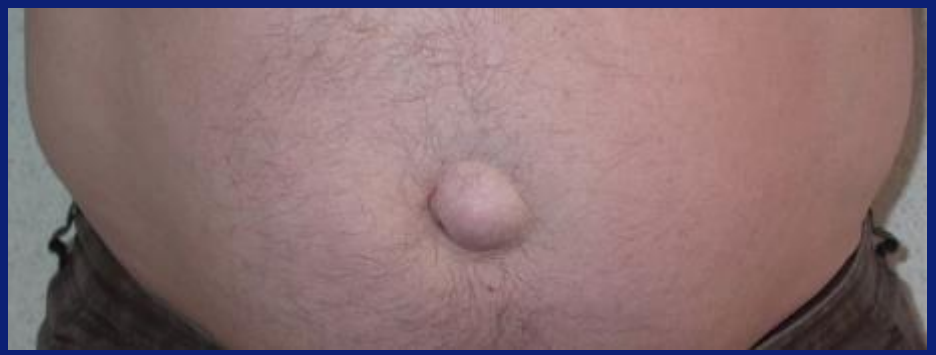
Post Anesthetic Discharge Scoring System (PADSS)

Category	Points
Vital signs	
- BP en HR ± 20% of pre-operative value	2
- BP en HR ± 20-40% of pre-operative value	1
- BP en HR ≥40% van pre-operative value	0
Activity	
- Steady gait, no dizziness or meets pre-operative level	2
- Requires assistance	1
- Unable to ambulate	0
Nausea and vomiting	
- No or minimal/treated with p.o. medication	2
- Moderate/ treated with parental medication	1
- Severe despite treatment	0
Pain	
- No/minimal treated with p.o. medication (VAS 0-3)	2
- Moderate/ treated with parental medication (VAS 4-6)	1
- Severe despite treatment (VAS 7-10)	0
Surgical bleeding of the wound	
- None or minimal (no intervention required)	2
- Moderate	1
- Severe	0

Inclusion and exclusion criteria

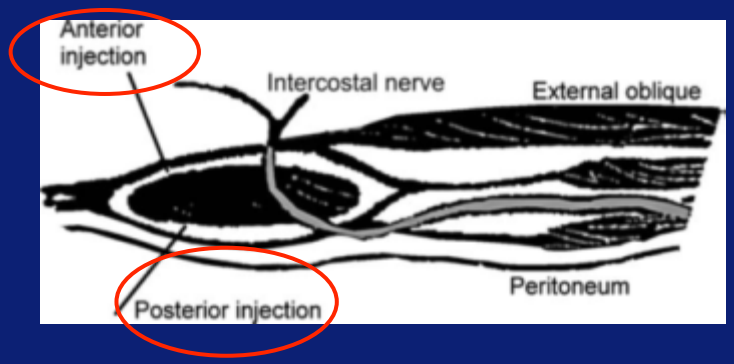
- Inclusion criteria
  - Primary umbilical hernia
  - Age ≥ 18 years

- Exclusion criteria
  - Diameter UH > 3 cm
  - Recurrence
  - Laparotomy
  - Ascites/cirrhosis
  - Emergency operation
  - BMI >27



Local anesthesia technique

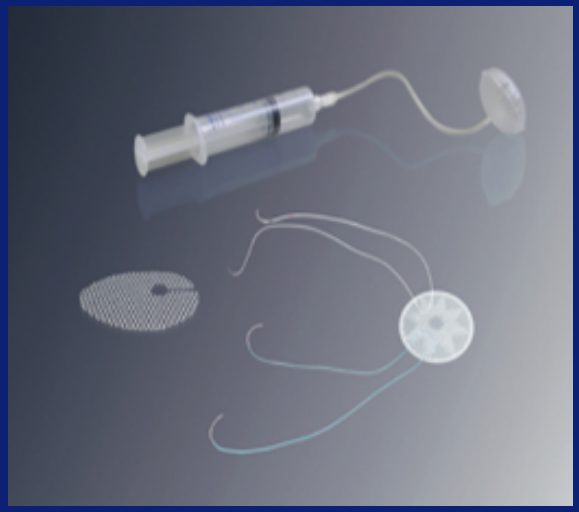
- Paraumbilical block technique
- Infiltration anterior and posterior rectus sheath
- Skin infiltration
- Ropivacain 0.75% (3mg/kg body weight)
- Remifentanil 0.5 ug/kg

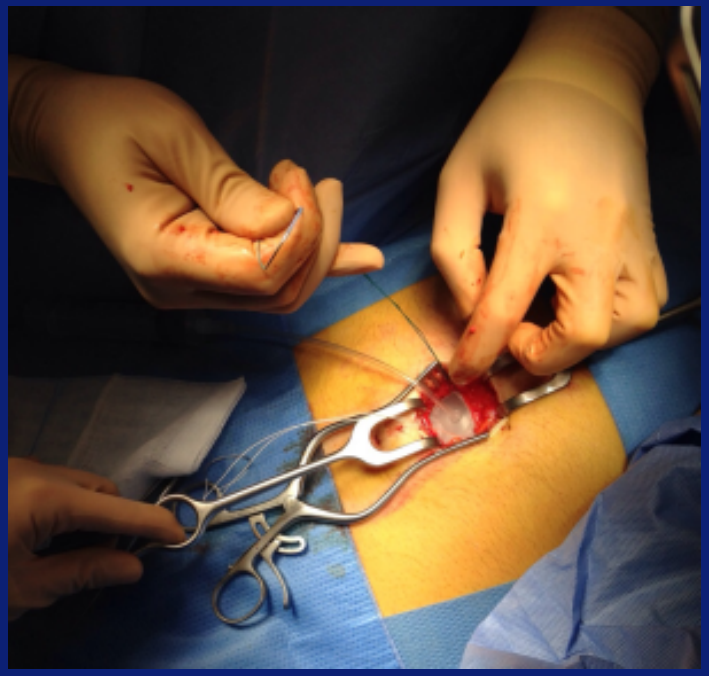


Injection local anesthesia

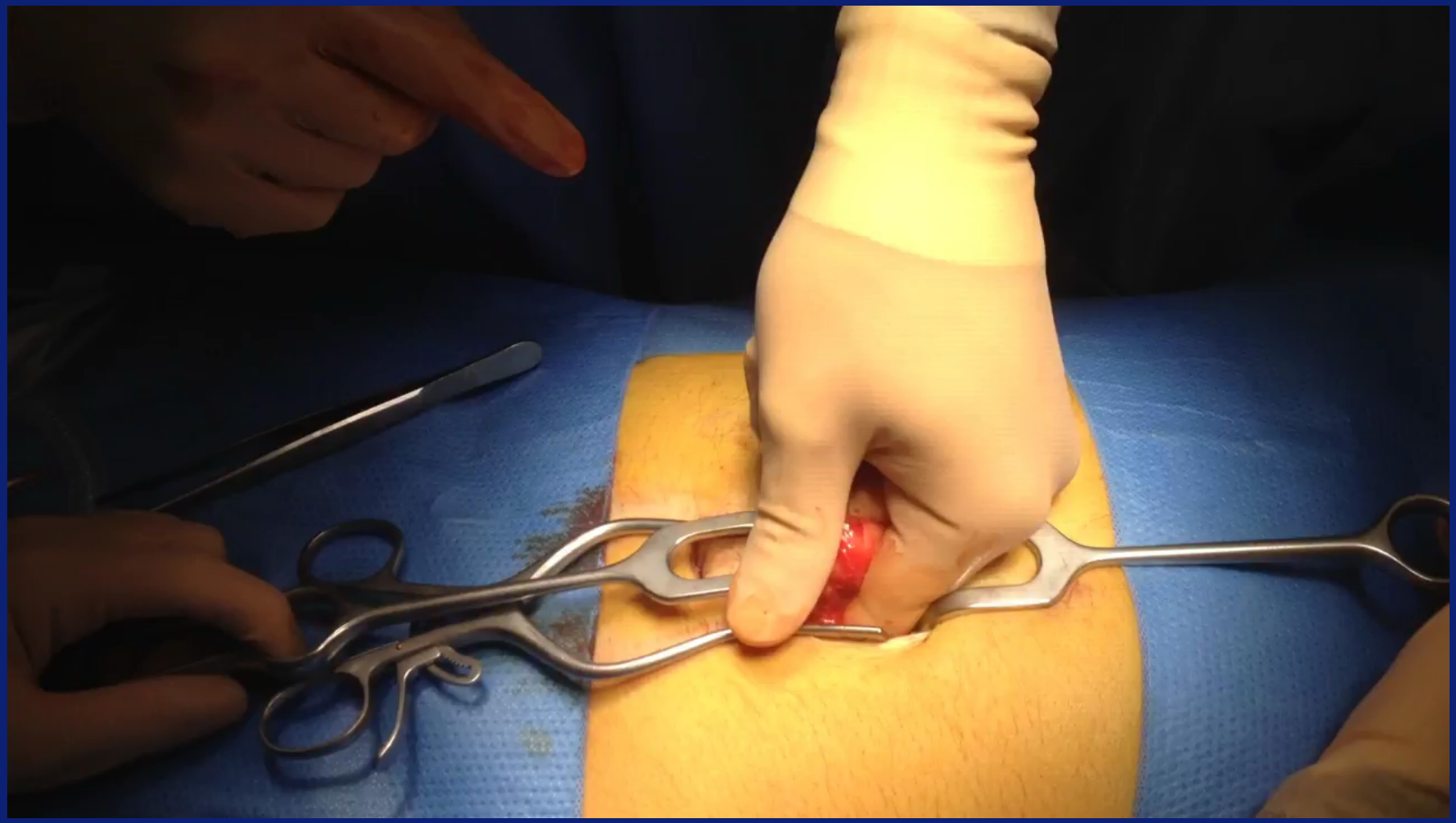
Surgical procedure

- Paraumbilical incision
- Dissection of the hernia sac
- Reposition
- Measure defect
- < 1 cm primary closure; 1-3 cm: mesh
- Mesh preperitoneal or intraperitoneal
- Overlap of 2 cm
- Cousin Cabs Air mesh





Surgical procedure



Postoperative procedure

- Outpatient clinic

Follow up point	Reherniation (exact date)	Reoperation (exact date)	MOS SF-36 and EQ-5D	Ultrasound imaging	Stress survey	VAS pain score
Inclusion	Not applicable	Not applicable	×	None	None	×
Postoperative (day 0-1)	Not applicable	Not applicable	None	None	×	×
Post-operative (days 1-7)	Not applicable	Not applicable	None	None	None	×
2 weeks	×	×	None	None	None	×
6 months	×	×	×	None	None	×
12 months	×	×	×	×	None	×

But first…. Pilot study

- Investigate: Feasibility? Safety?
- Aim: include 30 patients, operation UH under local anesthesia
- Primary endpoint: safety and feasibility
  - No conversion to general anesthesia
  - No complications, no deaths
- Secondary endpoints
  - Time to discharge
  - Pain (VAS)

Preliminary data pilot study

- May 2015: 6 patients operated
  - Mean age: 52 years, 3 male
  - 4 Cabs Air mesh
  - No conversion to general anesthesia
  - No postoperative complications, no deaths
  - Time to discharge: <3 hours

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Thank you for your attention!

Any questions?